

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-16. (Canceled).

17. (New) A fuel cell system comprising:

a fuel cell which generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell;

estimating means for estimating whether there is a possibility that a chemical short is occurring in the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and

scavenging means for supplying a scavenging gas to the cathode side when it has been estimated that there is a possibility that the chemical short is occurring.

18. (New) A fuel cell system comprising:

a fuel cell which generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell;

gas pressure detecting means for detecting a gas pressure of the fuel gas on the anode side of the fuel cell;

closing means for closing off the anode side of the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and

scavenging means for scavenging residual gas on the cathode side by supplying a scavenging gas to the cathode side when a gas pressure decrease amount of the fuel gas sealed on the anode side by the anode side being closed off by the closing means is larger than a reference value.

19. (New) A fuel cell system comprising:

a fuel cell which generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell;

concentration detecting means for detecting a gas concentration of the oxidization gas on the cathode side; and

scavenging means for scavenging residual gas on the cathode side by supplying a scavenging gas to the cathode side when the gas concentration of the oxidization gas remaining on the cathode side of the fuel cell falls below a reference value when supply of the fuel gas and the oxidization gas to the fuel cell is stopped.

20. (New) A fuel cell system comprising:

a fuel cell which generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell;

an estimating device that estimates whether there is a possibility that a chemical short is occurring in the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and

a scavenging device that supplies a scavenging gas to the cathode side when it has been estimated that there is a possibility that the chemical short is occurring.

21. (New) The fuel cell system according to claim 20, wherein the estimating device is provided with gas pressure detecting device for detecting a gas pressure of the fuel gas on the anode side of the fuel cell, and closing device for closing off the anode side of the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and the estimating device is adapted to estimate that there is a possibility that the chemical short is occurring when it has been determined that a gas pressure decrease amount of the fuel gas sealed on the anode side by the anode side being closed off by the closing device is greater than a first reference value.

22. (New) The fuel cell system according to claim 21, wherein the gas pressure detecting device is adapted to detect a first gas pressure of the fuel gas sealed on the anode side after a first predetermined period of time has passed after the anode side of the fuel cell is closed off, and to detect a second gas pressure of the fuel gas sealed on the anode side after a second predetermined period of time has passed after the first gas pressure is detected, and to obtain a difference between the first gas pressure and the second gas pressure is obtained as the gas pressure decrease amount.

23. (New) The fuel cell system according to claim 20, wherein the estimating device is provided with concentration detecting device for detecting a gas concentration of the oxidization gas on the cathode side, and the estimating device is adapted to estimate that there is a possibility that the chemical short is occurring when it has been determined that the gas concentration of the oxidization gas remaining on the cathode side of the fuel cell has decreased to less than a second reference value when supply of the fuel gas and the oxidization gas to the fuel cell is stopped.

24. (New) The fuel cell system according to claim 20, wherein the estimating device is provided with gas pressure detecting device for detecting a gas pressure of the fuel gas on the anode side of the fuel cell, and closing device for closing off the anode side of the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and the estimating device is adapted to obtain a gas pressure decrease amount of the fuel gas sealed on the anode side by the anode side being closed off by the closing device to estimate a consumption amount of the oxidization gas on the cathode side by the obtained gas pressure decrease amount, and to estimate that there is a possibility that the chemical short is occurring when the estimated consumption amount is greater than a third reference value.

25. (New) The fuel cell system according to claim 20, wherein the estimating device is adapted to estimate again, when it has been estimated that there is a possibility that the chemical short is occurring, whether there is a possibility that the chemical short is occurring, and the scavenging device is adapted to supply the scavenging gas to the cathode side when it has been estimated again that there is a possibility that the chemical short is occurring.

26. (New) The fuel cell system according to claim 20, wherein the fuel gas is hydrogen gas, the oxidization gas is air, and the scavenging gas is a small amount of air.

27. (New) The fuel cell system according to claim 20, wherein the scavenging device is adapted to supply to the cathode side an amount of the oxidization gas that is less than the amount of the oxidization gas supplied to the cathode side when the fuel cell is idling, when it has been estimated that there is a possibility that the chemical short is occurring.

28. (New) A vehicle comprising:

a power storage device capable of charging and discharging for driving the vehicle;

and

the fuel cell system according to claim 20.

29. (New) The vehicle according to claim 28, wherein the estimating device is adapted to estimate whether there is a possibility that the chemical short is occurring when the fuel cell is stopped in an intermittent operating state.

30. (New) A fuel cell system comprising:

a fuel cell which generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell;

a gas pressure detector which detects a gas pressure of the fuel gas on the anode side of the fuel cell;

a closing device that closes off the anode side of the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and

a scavenging device which scavenges residual gas on the cathode side by supplying a scavenging gas to the cathode side when a gas pressure decrease amount of the fuel gas sealed on the anode side by the anode side being closed off by the closing device is larger than a reference value.

31. (New) A fuel cell system comprising:

a fuel cell which generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell;

a concentration detector which detects a gas concentration of the oxidization gas on the cathode side; and

a scavenging device which scavenges residual gas on the cathode side by supplying a scavenging gas to the cathode side when the gas concentration of the oxidization gas remaining on the cathode side of the fuel cell falls below a reference value when supply of the fuel gas and the oxidization gas to the fuel cell is stopped.

32. (New) A control method for a fuel cell system provided with a fuel cell that generates electricity by a chemical reaction between a fuel gas supplied to an anode side of the fuel cell and an oxidization gas supplied to a cathode side of the fuel cell, comprising:

estimating whether there is a possibility that a chemical short is occurring in the fuel cell when supply of the fuel gas and the oxidization gas to the fuel cell is stopped; and

supplying a scavenging gas to the cathode side when it has been estimated that there is a possibility that the chemical short is occurring.